

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P313591

Luminaire Tested: **24FCZ2-45-UNV-L83050-RDP-CA08-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P313591
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L83050-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

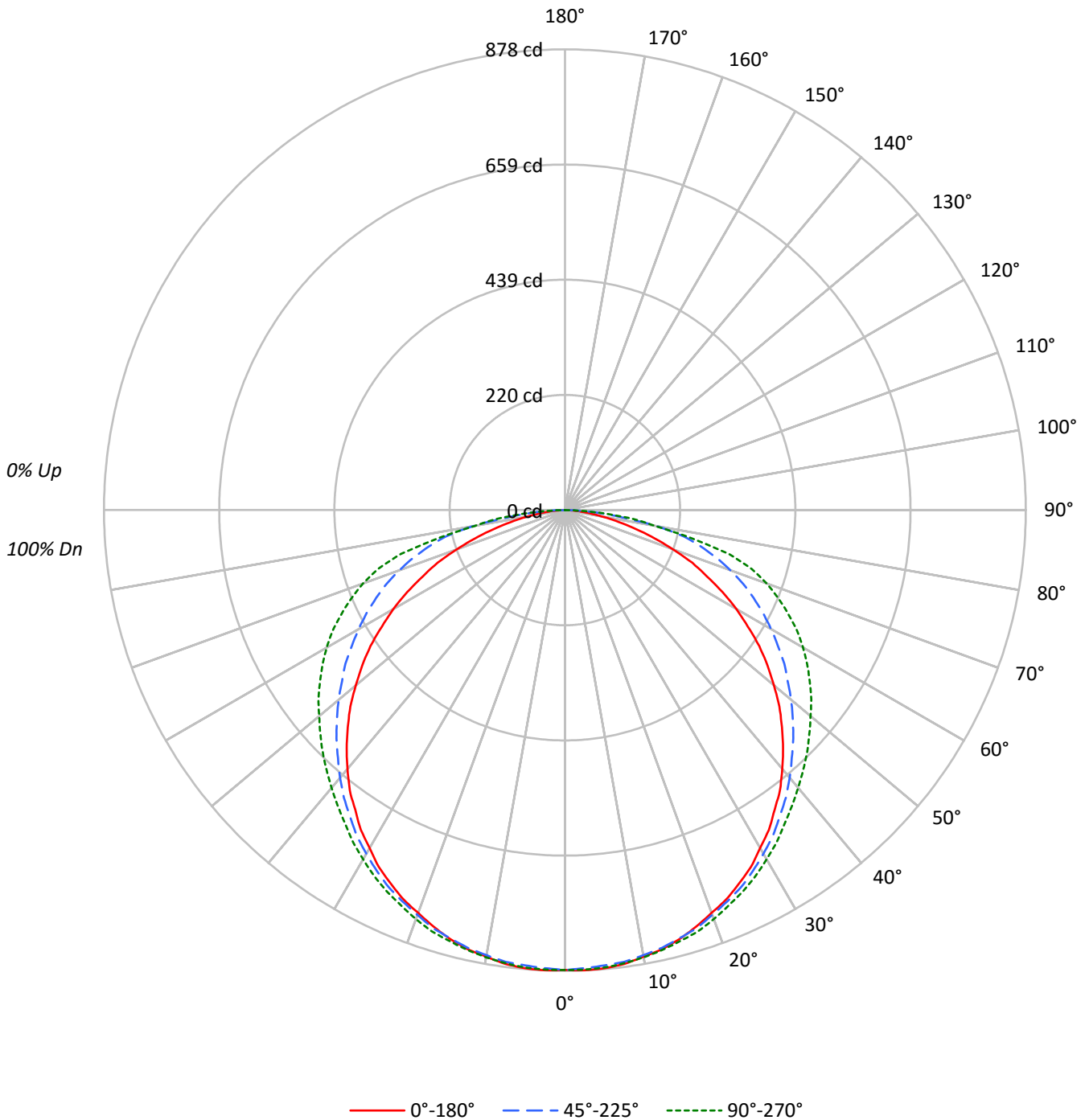
Lumens per Lamp: N/A
Luminaire Lumens: 2787.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1179	1179	1179
5°	1184	1176	1182
10°	1180	1177	1182
15°	1178	1176	1184
20°	1170	1176	1188
25°	1166	1178	1190
30°	1155	1175	1194
35°	1144	1172	1199
40°	1131	1170	1214
45°	1113	1171	1242
50°	1088	1178	1279
55°	1060	1197	1336
60°	1016	1220	1410
65°	951	1263	1496
70°	865	1321	1610
75°	733	1394	1682
80°	578	1403	1361
85°	426	1067	1195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.1	3.0
10°-20°	239.3	8.6
20°-30°	365.9	13.1
30°-40°	447.3	16.0
40°-50°	476.7	17.1
50°-60°	455.8	16.4
60°-70°	386.1	13.9
70°-80°	259.5	9.3
80°-90°	73.2	2.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	688.3	24.7
0°-40°	1135.6	40.7
0°-60°	2068.1	74.2
0°-90°	2787.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	876	875	871	875	875	83
15°	846	846	845	852	850	239
25°	785	788	794	800	802	362
35°	697	702	713	727	730	436
45°	585	594	615	641	652	451
55°	452	469	510	550	570	403
65°	299	329	397	449	470	296
75°	141	192	268	314	324	151
85°	28	57	69	75	77	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	876.4	876.4	876.4	876.4	876.4
2.5°	877.8	877.8	873.7	876.4	876.4
5°	876.4	875.0	870.9	875.0	875.0
7.5°	872.3	870.9	868.1	872.3	870.9
10°	864.0	864.0	861.2	865.4	865.4
12.5°	857.1	855.7	854.3	859.8	858.5
15°	846.0	846.0	844.6	851.5	850.2
17.5°	832.2	833.6	835.0	840.5	841.9
20°	817.0	819.8	821.1	829.4	829.4
22.5°	803.2	804.5	807.3	815.6	815.6
25°	785.2	788.0	793.5	800.4	801.8
27.5°	767.2	768.6	775.5	785.2	786.6
30°	743.7	747.9	756.2	767.2	768.6
32.5°	723.0	727.1	736.8	747.9	750.6
35°	696.7	702.3	713.3	727.1	729.9
37.5°	673.2	677.4	691.2	706.4	710.5
40°	644.2	652.5	666.3	684.3	691.2
42.5°	615.2	623.5	640.0	663.5	671.8
45°	584.7	594.4	615.2	641.4	652.5
47.5°	554.3	565.4	588.9	619.3	631.7
50°	519.8	533.6	562.6	597.2	611.0
52.5°	486.6	503.2	535.0	573.7	591.7
55°	452.0	468.6	510.1	550.2	569.5
57.5°	413.3	435.5	481.1	526.7	547.4
60°	377.4	398.1	453.4	503.2	523.9
62.5°	338.7	366.3	425.8	478.3	499.0
65°	298.6	329.0	396.7	449.3	470.0
67.5°	262.7	295.8	367.7	420.2	441.0
70°	219.8	261.3	335.9	388.5	409.2
72.5°	179.7	225.3	302.7	353.9	373.2
75°	141.0	192.2	268.2	313.8	323.5
77.5°	105.1	159.0	232.2	251.6	244.7
80°	74.6	127.2	181.1	171.4	175.6
82.5°	48.4	96.8	112.0	127.2	131.3
85°	27.6	56.7	69.1	74.6	77.4
87.5°	12.4	20.7	27.6	27.6	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)